

**Five New Genera of Fossil Oestromuscaria. (Diptera).**

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**ADIPTERITES** gen. nov.

Genotype, *Dipterites obovatus* Heer, *Urwelt Schweiz*, fig. 323 (1865). Maggot. Upper Miocene of Oeningen, Baden.

Length, 24 mm; width, 18 mm. Oval, showing 13 segments, venter of second to twelfth but especially second to tenth segments furnished with heavy armature and chitinized in what appear like segmental plates, dorsum unarmed. Evidently cuterebrid or hypodermatid stock, but unlike any form hitherto known.

**COCKERELLITHA** gen. nov.

Genotype, *Glossina osborni* Cockerell, *Nature*, April, 128 (1909). Fly. Miocene of Florissant, Colorado.

Length of body, 10-1/3 mm; wing, 7 mm. M2 not so strongly curved before R6 as in *Paloestrus* and the living glossinid genera, M3 axis at right angle to M2, being the opposite extreme in venation from *Lithoglossina* erected below.

**LITHOGLOSSINA** gen. nov.

Genotype, *Glossina armatipes* Cockerell, *Pr. Biol. Soc. Wash.*, XXX, 19 (1917). Male fly. Miocene of Florissant, Colorado.

Length of abdomen, 6½ mm; wing, 7½ mm; hind femur, 4 mm; hind tibia, 3 mm. M3 strongly sinuate, its axis at 45° to M2. Hind femora and tibiae armed with row of strong bristles, hind metatarsi bearing 2 stout longitudinally striate spines. Quite in contrast to other glossinid genera, which show hind legs only faintly bristled and M3 only faintly sinuate.

**ELECTROTACHINA** gen. nov.

Genotype, *E. smithii* sp. nov. For new genus Muscidae aff. *Tachina* sp. F. Smith, *Quart. Jn. Sc.*, V, 184, pl. 18, fig. 5 (1868). Fly Lower Oligocene of Baltic amber.

Length of body, 8 mm; wing, 7 mm. Body not stout. Wings much longer than abdomen, 5R apparently narrowly open or closed, M3 apparently nearer R6. Legs moderate length. Abdomen apparently ovate and rather deep. Probably exoristid or tachinid stock.

**VINCULOMUSCA** gen. nov.

Genotype, *Musca vinculata* Scudder, *Bull. U. S. G. G. Sur.*

Terr., III, 758 (1877); Tert. Ins. No. Am., 554, pl. 5, fig. 77 (1890). Maggot. White River. Eocene of Chagrin Valley, Colorado.

Length, 17 mm; width,  $4\frac{1}{2}$  mm. Stout subcylindric, venter with broad transverse micro spine bands best marked on fourth to ninth segments. Apparently exoristid or tachinid stock.

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### Notes on the Distribution of *Vermileo* in the United States and Mexico with a Description of a New Species. (Diptera: Rhagionidae).

By DONALD DELEON, Berkeley, California.

The genus *Vermileo*, or worm-lions as they are commonly called, includes a group of true flies of very remarkable habits. It seems, however, that both the latin name and the commonly used translated equivalent are misleading, for in habits they are not lion-like insects that feed on "worms" but "worms" or better maggots with the habit of preying on small arthropods that fall into their pits in the sand or dust. Their mode of life is quite similar to that of *Myrmelcon* which, as the name indicates, includes a group of predatory insects feeding chiefly on ants.

Wheeler<sup>1</sup> gives an account of the habits and distribution of all the known species of this genus and in addition a detailed study of the morphology of that common species of the Sierra Nevada Mountains, *V. comstocki* Wh. It was believed by Wheeler that this species was a mountain form and found only at elevations above 4000 feet. In April 1934 the writer reared specimens of this species from material collected in February in the Coast Range at Pinnacles National Monument at an elevation of about 1600 feet. The Pinnacles National Monument is near Hollister, California. On December 22, 1936, Ranger Powell of this monument sent in about a dozen more larvae from this locality. Three of these larvae pupated and transformed between February 2 and March 1, 1937.

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<sup>1</sup>Wheeler, W. M. Demons of the dust. W. W. Norton, New York, 1930.